CITY OF LOS ANGELES
DEPARTMENT OF WATER AND POWER
INTRADEPARTMENTAL CORRESPONDENCE

Date: September 17, 2013

To: Board of Water and Power Commissioners

From: Ronald O. Nichols, General Manager

Subject: Responses to Commissioner Requests

As part of management's continuing efforts to respond to Commissioner requests, please find attached information on the following:

Power System

- Renewable Portfolio Standard (RPS) Projects Update – August 2013

It is anticipated this matter may be discussed on October 1, 2013. If you have any questions, please contact me at (213) 367-1338.

/nsh
Attachments
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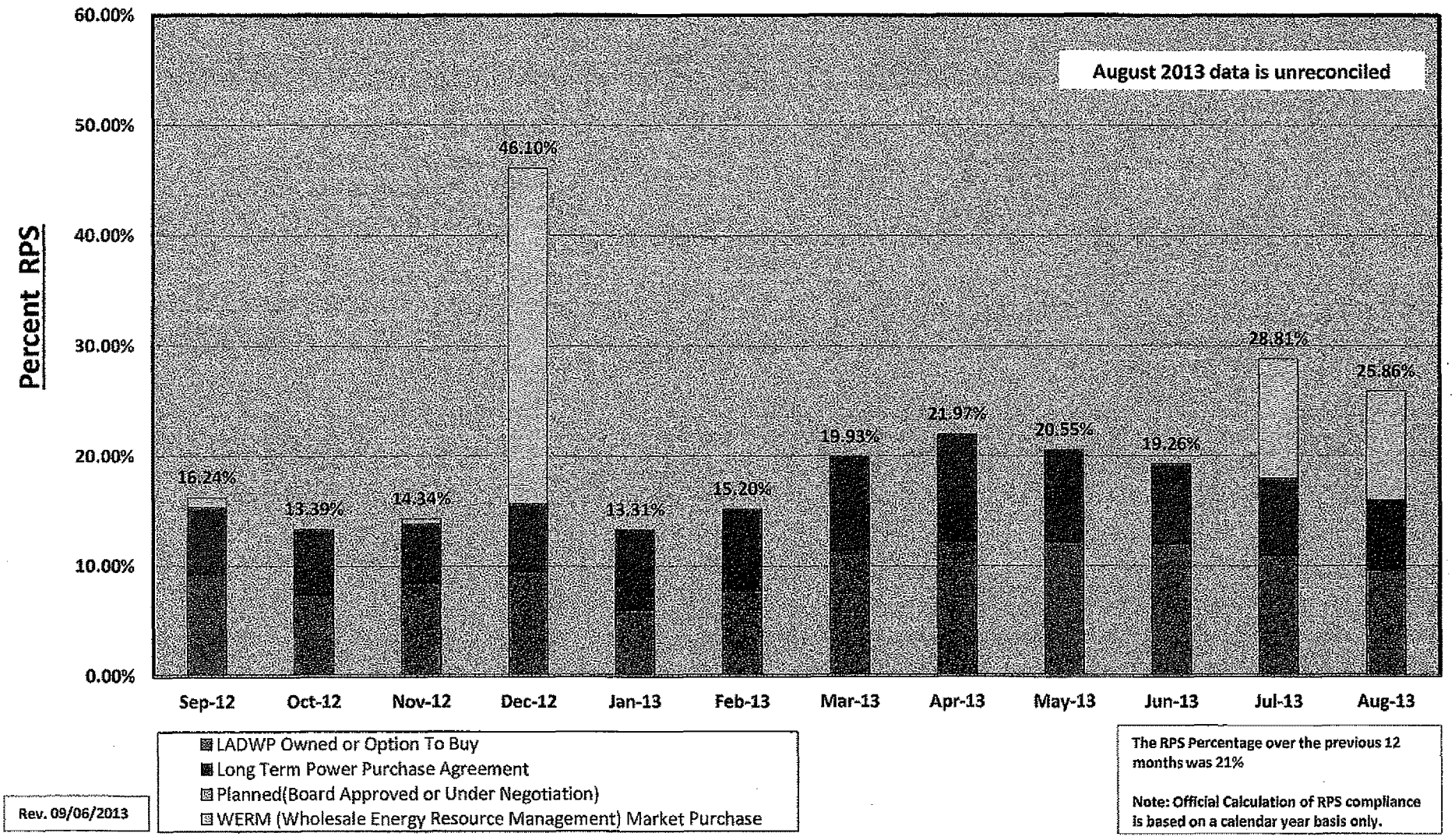
Actual Monthly Renewable Energy From Generation and Purchases For the Preceding 12 Months



LADWP RPS Master Project List

Project	Technology	PPA/Own	COD	Ownership Option date	LA's Shares MW	LA's Shares GWh	Comments		2013	2014	2015	2016	2017	2018	2019	2020	2021
Projects In-service																	
Small Hydro	Small Hydro	Own	In service		208	569	Existing	DWP Owned	0.98%	2.44%	2.47%	2.51%	2.53%	2.54%	2.55%	2.54%	2.50%
Hyperion Digester Gas	Biomass Digester	Own	In service		16	131	Existing	DWP Ownership Option	0.62%	0.56%	0.57%	0.58%					
Lopez Microturbine	Biomass Landfill Gas	Own	In service		1.5	1	Existing	DWP Owned/Option to Own	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
WM Bradley	Biomass Landfill Gas	PPA	In service		6.4	44	Existing	PPA	0.10%	0.19%	0.19%						
DWP Built Solar	Solar Photovoltaics	Own	In service		3.2	5.3	Existing		0.01%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
Solar CNM (SB1)	Solar Photovoltaics	Own (REC's only)	In service		64.2	106.0	Decreased due to new CEC Regs		0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
PPM SW Wyoming	Wind	PPA	7/1/08		82.2	171.5	2005 SCPPA RFP		0.81%	0.74%	0.75%	0.76%	0.76%	0.77%	0.77%	0.77%	0.76%
Castaic U3&U5 Upgrade	Hydro	Own	In service		30	9	Existing		0.02%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
PPM Pebble Springs	Wind	PPA	1/30/09		68.7	192.6	2006 SCPPA RFP		0.88%	0.83%	0.84%	0.85%	0.86%	0.86%	0.86%	0.86%	0.85%
MWD Sepulveda	Small Hydro	PPA	In service		8.5	33	2008 SCPPA RFP		0.00%	0.14%	0.14%	0.14%	0.14%	0.15%	0.15%	0.15%	0.14%
Willow Creek	Wind	PPA	12/1/08		72	197.3	2007 DWP RFP		0.73%	0.85%	0.86%	0.87%	0.88%	0.85%	0.86%	0.86%	0.87%
Pine Tree Wind Power Project	Wind	Own	6/1/10		135	381.5	Existing		1.17%	1.64%	1.66%	1.68%	1.70%	1.70%	1.71%	1.70%	1.68%
Shell Energy Landfill Gas	Biomethane	PPA	8/1/09		n/a	400	2009 Gas Purchase		1.86%	0.75%							
Atmos Energy Landfill Gas	Biomethane	PPA	9/1/08		n/a	210	2009 Gas Purchase		1.07%	0.72%							
Milford Wind Phase I	Wind	PPA/Own	1/10/09	11/16/19	185	434.3	2006 SCPPA RFP		1.40%	1.86%	1.89%	1.91%	1.94%	1.94%	1.94%	1.94%	1.91%
Milford Wind Phase II[1]	Wind	PPA/Own	5/2/11	7/1/18	102	217	PPA w/3-year layoff agreement		0.72%	0.90%	0.90%	0.91%	0.92%	0.92%	0.92%	0.92%	0.91%
Windy Point Phase II	Wind	PPA/Own	1/31/10	1/31/18	262.2	693.9	2007 SCPPA RFP		3.05%	2.88%	3.01%	3.06%	3.08%	3.10%	3.11%	3.10%	3.06%
Toyon Power Plant	Biomass Landfill Gas	PPA	In service		3.6	7.4	Contract extended for 18 months		0.04%								
Linden	Wind	Own	6/30/10		50	145.4	2007 SCPPA RFP		0.02%	0.62%	0.63%	0.64%	0.65%	0.65%	0.65%	0.65%	0.64%
North Hollywood PS Power Plant	Small Hydro	Own	In service		1	5.5	Existing		0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
Shell Renewable Biomethane	Biomethane	PPA	1/1/12	12/31/21	n/a	520	2011 Gas Purchase		1.45%	2.05%	2.20%	2.29%	2.32%	2.32%	2.33%	2.32%	1.81%
Adelanto Solar Facility	Solar Photovoltaics	Own	8/30/12		10.0	20	Budgeted		0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.08%	0.08%
Pine Tree Solar Facility	Solar Photovoltaics	Own	3/15/13		8.5	17	Budgeted		0.08%	0.07%	0.07%	0.07%	0.08%	0.08%	0.07%	0.07%	0.07%
Manzana Wind	Wind	PPA	12/20/12		39	104	10 year contract		0.49%	0.45%	0.45%	0.46%	0.46%	0.46%	0.47%	0.46%	0.46%
Total					1,357	4,615			16.98%	18.01%	16.86%	16.96%	16.56%	16.61%	16.63%	16.56%	15.85%
Projects Under Construction																	
DWP Built Solar (In-Basin)	Solar Photovoltaics	Own	2013-2019		100	180	Budgeted		0.01%	0.03%	0.06%	0.10%	0.20%	0.33%	0.46%	0.60%	0.71%
Solar Customer Net Metered	Solar Photovoltaics	Own (REC's only)	2013-2030		79.0	117	Budgeted		0.05%	0.36%	0.49%	0.62%	0.71%	0.70%	0.82%	0.84%	0.83%
Solar Feed-In-Tariff	Solar Photovoltaics	PPA	2013-2016		150	263	Budgeted		0.00%	0.12%	0.46%	0.93%	1.17%	1.17%	1.16%	1.16%	1.14%
Sempra Copper Mountain 3 Solar	Solar Photovoltaics	PPA/Own	12/31/15		210	453	Partial COD at end of 2014			0.85%	1.61%	1.98%	1.99%	1.97%	1.96%	1.94%	1.90%
K Road Moapa Solar	Solar Photovoltaics	PPA/Own	6/30/16		250	557	Partial COD at end of 2014			0.09%	1.20%	2.30%	2.46%	2.49%	2.41%	2.39%	2.34%
Castaic U1 Upgrade	Hydro	Own	10/31/13		15	4.5	Budgeted		0.00%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
Ormat Wild Rose Geothermal	Geothermal	PPA	1/1/14		13.71	114			0.04%	0.49%	0.50%	0.50%	0.51%	0.51%	0.51%	0.51%	0.50%
Total					818	1,689			0.10%	1.96%	4.39%	6.48%	7.04%	7.20%	7.35%	7.45%	7.44%
Projects Planned																	
Aqueduct PP Improvements	Hydro	Own	7/1/16		4	30	Budgeted					0.07%	0.13%	0.13%	0.13%	0.13%	0.13%
Water System Hydro	Small Hydro	Own	7/1/16		4	22	Budgeted					0.05%	0.10%	0.10%	0.10%	0.10%	0.10%
Ormat Heber 1 Geothermal	Geothermal	PPA	2016-2025		35	291	10 year contract					0.83%	0.83%	0.84%	1.30%	1.30%	1.28%
Total					43	343			0.00%	0.00%	0.00%	0.94%	1.07%	1.07%	1.54%	1.53%	1.61%
Sub Total					2,218	6,647											
								Total Expected	16.08%	19.97%	21.25%	24.39%	24.67%	24.87%	26.51%	25.57%	24.93%
Potential Projects																	
Imperial County Geothermal Project -1,2,3,4	Geothermal	Owned	2020-2025		60	400										0.89%	1.32%
Solar PPA 2015 R	Solar	PPA/Own	12/31/15		60	129					0.31%	0.57%	0.57%	0.57%	0.56%	0.56%	0.66%
Solar PPA 2016 S	Solar	PPA/Own	12/31/16		100	232						0.33%	1.03%	1.03%	1.02%	1.03%	[illegible]
Beacon Solar Project	Solar	PPA/Own	1/1/16		250	538						1.80%	2.39%	2.39%	2.38%	2.37%	2.39%
Southern Owens Valley Solar Ranch (SOVSR)	Solar Photovoltaics	Own	2017-2020		200	430	Budgeted						0.48%	0.96%	1.44%	1.91%	1.86%
Pine Canyon Wind Project	Wind	Own	12/31/18		70	227									1.02%	1.01%	1.00%
Short-Term Market Purchases	Various Types	PPA	2013		0	0			5.45%								
Total					730	1,958		Total Under Negotiation	5.4%	0.0%	0.3%	2.6%	4.5%	4.9%	6.4%	7.8%	8.1%
Sub Total					730	1,956											
Grand Total					2,948	8,603		Grand Total	21.53%	20.0%	21.6%	27.0%	29.1%	29.8%	31.9%	33.3%	33.0%
								DWP Owned	3.6%	6.0%	6.2%	9.6%	8.9%	10.6%	16.2%	16.7%	17.0%
								Option to Own	5.2%	6.7%	9.0%	9.7%	11.3%	11.3%	8.3%	8.3%	8.1%
								DWP Owned/Option to Own	8.8%	12.7%	15.2%	19.4%	21.2%	21.9%	23.5%	24.8%	25.1%
								PPA	12.7%	7.3%	6.4%	7.6%	7.8%	8.0%	8.4%	8.4%	7.9%
								Total Master List Projects	21.5%	20.0%	21.6%	27.0%	29.1%	25.5%	31.9%	33.3%	33.0%
								2012 to 2020 RPS Goal	21.0%	22.0%	23.0%	25.0%	27.0%	29.0%	31.0%	33.0%	
								Forecasted Total Sales to Ultimate Customers (GWh)[2]	22,939	23,304	23,017	22,687	22,444	22,385	22,345	22,405	22,706

[1]: Milford II is a PPA with a 3-year layoff agreement expiring on 4/1/14 with the City of Glendale for 5 MW. If Glendale exercises their option, then LADWP's shares will be 186 GWh.

[2]: Based on figures published as of March 2013.

DISCLAIMER: Pending projects are subject to change due to negotiations and construction schedules.

Geothermal PPA Wild Rose Project (Project)

Description: A new geothermal project by Developer. The Project is located in Mineral County, Western Nevada.

Technology: Geothermal, binary technology.

Ownership: 20 year PPA without ownership option (Buyer does not require ownership).

Capacity: 16.2MW, 95% capacity factor (140GWh annually, 114GWh LADWP share).

Term: 20 years.

Commercial Operation Date: December 31, 2013.

Transmission and Point of Delivery: Mead 230kv, through the One Nevada Line, contingent upon completion of One Nevada Line which is currently scheduled to be complete by end of 2013. Energy will be delivered through the CAISO system to Mead 230kv Substation prior to One Nevada Transmission Line is in service.

Background: Developer proposed the Projects in response to the 2011 SCPPA Request for Proposals (RFP).

Source of Funding / Financial Partners: Developer is self-financing.

Cost: $99/MWh with no escalation for the contract term.

RPS and Environmental Benefits: This Project will provide a reliable, base-load Bucket 1 energy with minimal integration costs at a fixed price for 20 years; it will add geothermal energy supply into the LADWP renewable portfolio mix; it will provide Project participants the opportunity to explore the geothermal resources in Nevada, which is an important part of the long-term coal replacement strategy for the Intermountain Power Plant in Utah. The energy provided by this Project would represent approximately 0.5 percent of the LADWP's RPS requirement in 2020 and shall be enough to initially serve more than 19,000 homes. This Project will eliminate approximately 64,100 Metric Tons of CO_2 each year which is equivalent to removing 12,300 cars from the road.

Project History and Status: Project exploration and environmental assessment are complete, transmission capacity and NV Energy interconnection are secured and agreement to be executed by 10/31/2013. Project presentation to SCPPA was made on 4/10/12. Project was short listed by SCPPA and Letter of Intent was sent to Developer on 4/27/12. Negotiation started in June 2012 and completed in December 2012. Developer signed PPA on 12/31/12. Original shares for SCPPA participants were: 2.16MW each for Glendale and Burbank and 11.88MW for LADWP. Glendale decided to withdraw from participation on 12/7/2013. The new shares are: Burbank 2.49MW (15.38%), LADWP 13.71MW (84.62%). LADWP Board approved the Project on 3/5/13, the City Council E&E Committee and the City Council approved the Project on 3/20/13 and 4/3/13 respectively. PPA was effective on May 28, 2013, Project is currently under construction.

Imperial Valley Geothermal Exploration and Development Project (Project)

Description: Geothermal Resources exploration and development in Imperial Valley. This project was originally a joint project by LADWP, IID and SCPPA to explore geothermal resources on LADWP and IID owned lands. Share of Project to be 50 percent LADWP, 32.5 percent IID, and 17.5 percent of other SCPPA members. Likely development of four 50MW projects after confirmation of resources, with in-service dates projected in the 2018-2025 period. MOU was signed by participants but the IID Board did not approve the land lease agreement, the MOU expired on December 6, 2012 after effective for one year. LADWP will start to explore resources on its lands but maintain the Project at SCPPA. If exploration results show sufficient resources for further development, LADWP may develop the Project jointly with other SCPPA participants. If IID Board approves the lease of the IID lands at a later date, a new MOU may be executed for a joint development.

Technology: Geothermal, flash technology targeted.

Ownership: LADWP, or proportionate shares by participants if a joint Project is implemented (to be determined).

Capacity: If exploration is successful, 49.9 MW is targeted in Phase 1; Future phases to be determined pending on exploration results. If a joint Project is implemented, participants will decide how to proceed with facility development after completion of resource exploration of each phase. Capacities will be confirmed after exploration.

Term: To be determined if a joint Project is implemented.

Commercial Operation Date: 2020-2025 targeted.

Transmission and Delivery Point: IID Path 42 system, to be determined.

Source of Funding / Financial Partners: LADWP. If a joint project is implemented, Project participants will share cost by proportion.

Cost: Approximately $5M budgeted each year for FY2013-14, 14-15, and 15-16 for exploration. If a joint Project is implemented, exploration cost will be subject to reimbursement by Project participants at a later date. If exploration is successful and power generation facilities are built, estimated average energy cost for a 30 year plant is from $73/MWh to $100/MWh.

Project History and Status: For the original joint Project, Board of Water and Power Commissioners approved the MOU on September 1, 2009, and conditionally approved the LADWP Lease Agreement on September 15, 2009, with a condition that LADWP's procurement rules, policies, and procedures be utilized for the project. The Lease Agreement requires City Council's approval. On September 17, 2009, the SCPPA Board of Directors adopted a resolution (Resolution No. 2009-111) to authorize the utilization of LADWP's procurement rules and policies to SCPPA projects in which LADWP is the

majority project participant. About the same time, IID added language to the MOU to include due diligence review process and obtain an 80 percent majority vote from participants prior to commencing any exploratory work. LADWP and IID legal teams amended the MOU for these two revisions. The City Councils of Burbank and Pasadena, respectively, approved the amended MOU in November 2009, and the IID Board of Directors approved it in December 2009. LADWP originally scheduled the amended MOU for Board approval on November 17, 2009, but was deferred pending the City Council decision on the Energy Cost Adjustment Factor and the approval of the Lease Agreement. A City Council meeting held on November 6, 2009 (Council file No. 09-2517) disapproved the Water and Power Board of Commissioners' action of September 15, 2009. The City Council requested LADWP to provide a thorough fiscal review and assessment of the project that includes the potential cost to build and operate the geothermal facility, transmission issues, as well as the project's impact to the Renewable Portfolio Standard program, power base rates, and the ECAF. The cities of Glendale and Colton were awaiting approval by Los Angeles before taking further action. On February 10, 2010, Project participants resumed regular conference call meetings. On December 21, 2010, the City Administrative Officer completed a report supporting the project. The MOU and the Lease Agreement were resubmitted and approved by the LADWP Board on February 1, 2011. The MOU (City Council approval not required) was signed by the General Manager on February 14, 2011. The Lease Agreement (City Council approval required) was approved by the City Council on June 28, 2011. Other SCPPA participants, including Glendale and Colton, also obtained approvals from respective governing bodies for the MOU. The MOU was officially executed on December 6, 2011. Stakeholders' round table meeting was held in IID on May 18, 2012. IID attempted to obtain the final Board approval for its Lease Agreements which included new lands added to the project. At its meeting of 10/16/12, IID Board decided to defer a decision of approving its Lease Agreements. The MOU was terminated on 12/6/2012 which was one year from the effective date. LADWP will start exploration work in its own lands without utilizing the MOU, but maintain the Project at SCPPA. SCPPA extended the existing agreement with geothermal consultant GeothermEx on February 12, 2013. LADWP requested GeothermEx to prepare an exploration drilling plan on LADWP lands and the drilling plan was completed on July 31, 2013. DWP is working on a SCPPA RFP for exploration drilling.

GEO PPA 2016 OH (Project)

Description: Developer proposes a project to SCPPA to sell energy from existing geothermal complex. The geothermal complex is located in Imperial Valley, California.

Technology: Geothermal, double flash steam geothermal unit (Heber 1) and bottoming binary Organic Rankine Cycle unit (Gould 1).

Ownership: PPA without ownership option.

Capacity: 46 MW net available in December 2015 through the end of contract term (approximately 380Wh/year) with a maximum annual depletion rate of 1%. LADWP and IID are the two project participants. LADWP share is 66.67% (30.68 MW) from 2016-2018, and 78% (35.88 MW) from 2019-2025.

Month	Max. Capacity Factor	Min. Capacity Factor
January	104.9%	102.5%
February	104.7%	101.8%
March	104.4%	101.1%
April	103.7%	99.5%
May	101.9%	95.7%
June	100.8%	93.4%
July	97.5%	87.0%
August	98.4%	88.8%
September	100.0%	91.8%
October	102.7%	97.3%
November	104.5%	101.5%
December	104.9%	102.5%

Term: 10 years.

Delivery Commencement Date: February 2, 2016 with an interim delivery period from December 16 to February 2, 2016.

Point of Delivery: Mead 230kV Substation (through WAPA System as primary path, or CAISO as secondary path if WAPA is not available) for LADWP, and Heber 92kv Substation for IID.

Background: Developer proposed the Projects on 6/29/12 in response to the SCPPA RFP 2012. RFP closing date 11/30/12. Developer revised proposal on 8/8/12 to offer a larger capacity (from 20MW/35MW to 39MW/46MW), and a longer term (from 5 year to 10 year), with reduced price (from $93/MWh flat to $90/MWh flat, and further reduced to $80/MWh with 1.5% escalation after negotiation).

Source of Funding / Financial Partners: Existing generating facilities. Developer is self-financing.

Cost: Originally (6/29/12) $93/MWh flat for the contract term, after negotiation, reduced to $90/MWh flat on 8/8/12, and $86/MWh flat on 3/18/13, further reduced to $80/MWh with 1.5% escalation on 3/30/13.

Project History and Status: Energy delivery will be from an existing Heber 1 geothermal complex which includes the Heber 1 double flash steam unit and the Gould 1 bottoming binary unit. The facility is expected to undergo a modest upgrade in the next two years (refurbishing the existing turbine and generator, adding new wells and potentially expanding the existing cooling tower). The plants are currently delivering energy to existing Buyer under a long term power purchase agreement that will expire in December 2015. LADWP and IID are interested in the Project. LOI was sent to Developer on 8/13/12, first draft Term Sheet was sent to Developer on 8/24/12, Developer returned Term Sheet on 9/13/12. IID officially joined the project in September, 2012. Internal call with IID to discuss the Term Sheet was held on 9/20/12, Second Term Sheet sent to Developer on 10/10/12. Due to the possible over compliance of Compliance Period 2, LADWP worked with IID to take less energy in the first three years (from 2016 and 2018, LADWP 30MW+-, IID 15MW+-; from 2019 to 2025, LADWP 35MW+-, IID 10MW+-). PPA negotiation continued and completed. Developer signed the PPA on May 31, 2013. LADWP Board approved the project on June 18, 2013, LA Council E&E Committee approved the project on August 21, 2013 and the City Council approved the project on August 28, 2013.

Sempra Copper Mountain 3 – Southern California Public Power Authority (SCPPA) Solar Generation Project (Project)

Description: Located in Boulder City Nevada, Sempra Generation is proposing to sell 250 Megawatt (MW) of renewable energy to SCPPA participant(s) that will be delivered to the 500 Kilovolt (kV) bus of the Marketplace Switching Station. This is the third phase of the Copper Mountain Solar project, with the 48 MW first phase completed in 2011 and the 150 MW second phase expected to be fully online by 2015, both of which contracted to Pacific Gas and Electric. The participants for this project include the Los Angeles Department of Water and Power (LADWP) and the City of Burbank (Burbank), with LADWP taking on 210MW, or 84 percent, and Burbank 40 MW, or 16 percent.

Technology: The renewable technology is photovoltaic solar utilizing polycrystalline panels with a Project capacity of 250 MW for 20 years.

Site Control: Site control for the Project is complete. The Project is situated on Boulder City land that is secured by long term lease contracts. The term of the lease is for 30 years with the option to renew for two additional ten year periods.

Ownership: The Power Purchase Agreement provides SCPPA with an Early Buyout Option (EBO) that allows SCPPA to buy the Project from the developer at the tenth, fifteenth, or twentieth year after the anniversary of the Commercial Operation Date (COD). The buyout price will be based on the Fair Market Value of the facility at the time of purchase, with pre-determined floor and ceiling prices.

Capacity: The solar facility has a renewable capacity of 250 MW. The capacity factor is 25 percent with an annual degradation factor of 0.8 percent.

Cost: The renewable solar energy will be a flat price over the term of the PPA which is $95.75 per Megawatt Hour. The average annual cost of the energy is expected to be $40.2 million, and the total expected cost over the life of the PPA is $805 million.

Term: 20 years.

Commercial Operation Date (COD): Expected final COD is December 2015. Partial COD is December 2014 for half of the capacity.

Transmission System and Delivery Point: The renewable solar project will interconnect at the 500 kV bus of Marketplace switching station in Boulder City, Nevada. A new 8-mile gen-tie line would be constructed to connect to the existing 500 kV substation at Marketplace.

Financial Firm: TBD.

Background: Developer proposed the Project in response to a 2011 SCPPA Request for Proposal.

Project Status: The project has been approved by the SCPPA, LADWP, and Burbank Boards, as well as LA City Council and Burbank City Council. As of March 29, 2013, all conditions have been met in order for the PPA to become effective. Marketplace Partners approved the Facility Study for the Project on April 9, 2013. Negotiation for final LGIA is complete with all signatures from Marketplace Partners to be gathered in July 2013. Sempra has begun engineering and procurement of large equipment for interconnection. Expectations are for line energization from Marketplace to Project by end of 2013. Grading of the substation pad is complete, foundation and underground work will commence soon. The water line has been installed and is in service. The gen-tie foundations have been complete. Construction of the water line has been completed. The EPC contract was executed on July 17, 2013, with AMEC, who is scheduled to mobilize the project site in September 2013. The O&M building contract was executed on July 8, 2013, with Quality Construction Managers with site work expected to commence in September 2013. The site access road contract was executed on July 24, 2013, with Aggregate Industries, and work has already commenced.

K Road Moapa Solar Generation Project

Description: Located on the Moapa Band of Paiutes (Tribe) Indian Reservation, 30 miles northeast of Las Vegas, Nevada, K Road Moapa Solar (K Road) proposed to sell up to 250 MW of renewable solar energy to SCPPA participant(s) that will interconnect into the power grid through the Crystal 500 kV Substation. The Los Angeles Department of Water and Power (LADWP) is the only participant.

Technology: The renewable technology will be fixed tilt photovoltaic solar with a project capacity of 250 MW.

Site Control: Site control is currently secured under a 50 year lease agreement with the Moapa Indian Tribe.

Ownership: The Power Purchase Agreement provides LADWP with an Early Buyout Option at the end of the 10, 15, 20, and 24 anniversary of the Full Commercial Operating Date. The buyout price will be based on the Fair Market Value of the facility at the time of purchase, with predetermined floor and ceiling prices.

Capacity: The solar facility has a renewable capacity of 250 MW. The capacity factor is 25.43% with an annual degradation factor of 0.8%. With this capacity factor the project would produce 557 GWh in the first year.

Cost: The renewable solar energy will be a fixed price for 250 MW with no escalation over a 25 year term.

Term: 25 years.

Guaranteed Commercial Operation Date (COD): The solar facility COD is 06/30/2016.

Transmission System and Delivery Point: LADWP will purchase approximately 5.5 miles of 500 kV transmission line in the BLM Corridor to the Crystal Substation before Guaranteed Commercial Operation Date (GCOD). The purchase price shall not exceed $18,000,000. The LADWP would be sole owner and operator of the transmission line through the term of the PPA.

Background: Developer proposed the Project in response to a 2011 SCPPA Request for Proposal.

Project Status: The PPA was approved by City Council on November 20, 2012. The Large Generation Interconnection Agreement (LGIA) was approved by City Council on June 28, 2013. Discussions on the design of the transmission line and collector station are currently underway. The effective date of the PPA was July 16, 2013. The tortoise fencing and translocation were completed in May 2013. Geotechnical testing has started at the site and once financing is achieved, expected in November 2013 then construction will officially commence. The project is expected to employ about 450 workers this summer and over 600 workers will be employed on the site by December 2013. The expected transmission line energization is June 2014 and the expected COD is December 2015.

Utility-Built Solar (UBS) - In-Basin Projects
150 Megawatts Direct Current (MWdc)

Background: The Solar Development Group is evaluating approximately 181 MWdc of small and medium-scale solar projects at over 100 different properties owned by the Los Angeles Department of Water and Power (LADWP) or by the City of Los Angeles for solar development. The best 150 MWdc composition of projects will be chosen for deployment based on best value and system integration.

Description: The UBS Program will contribute 400 MWdc to the overall LADWP Solar Program. Approximately 250 MWdc will be in the Owens Valley and 150 MWdc will consist of numerous projects in or near Los Angeles. Projects under UBS are categorized as follows: Reservoirs, Rooftops, Open Space, Parking Lots, Transmission Line Right-of-Ways, and LADWP Power System Properties.

Technology: Solar Photovoltaic (PV).

Ownership: LADWP will be the owner and operator of these projects. However, some projects may be bundled into a flip structure later to leverage tax benefits and then repurchased once the tax benefits have been exhausted.

Capacity: 150 MWdc combined from multiple projects. Amongst those, the Pine Tree and Adelanto Solar Project will each have a capacity of 9.75 MWdc and 11.4 MWdc, respectively.

Commercial Operation Date: Varies from December 2010 to December 2019.

Interconnection/Delivery Point: The majority of these projects will interconnect to the LADWP distribution grid. Pine Tree Solar will interconnect at 34.5kV at the Pine Tree collector station. The commercially operating Adelanto Solar Project is interconnected to the 4160V Adelanto station service.

Source of Funding/Financial Partners: LADWP was awarded Qualified Energy Conservation Bonds from California Debt Limit Allocation Committee, which provided a discounted finance rate for the Adelanto and Pine Tree Solar Projects. Other UBS projects may obtain funding from the Energy Cost Adjustment Factor (ECAF) and utilize third-party private investment companies to leverage tax benefits.

Cost: Approximately $670,000,000 in Capital Expenditure.

Projects Status: There are approximately 7.4 MWdc worth of projects under design and construction. To date, 16 projects, totaling approximately 23 MWdc, are in-service.

Projects Summary:

Adelanto Solar Project (11.4 MWdc) – Commissioned on June 30, 2012.

Pine Tree Solar Project (9.75 MWdc) – Commissioned on March 15, 2013.

Port of Los Angeles (POLA) Projects –

- Phase 2: four rooftop solar PV projects (450 kWdc) are under commercial operation as of December 17, 2012.
- Phase 3: consists of five additional LADWP-built solar PV rooftop projects (estimated aggregate total of 2.274 MWdc):
    - The projects are pending approvals of Letter of Agreements (LOA) from the Boards of LADWP and POLA.
    - POLA is currently reviewing fiscal impacts following recent modifications to the LOAs regarding construction site requirements.
    - Prior to start of construction, POLA will perform hazardous materials and historical/cultural surveys.

LADWP Rooftop, Reservoir, and Other Projects –

- Ten (10) projects have been placed in-service to date totaling **1.34 MWdc**:
    - **Lincoln Heights Center Warehouse and Admin Bldg, Palms District Truck Shed, Palmetto Construction HQ, Main Street Bldg 15, Van Nuys District Warehouse, Main Street Bldg 3, Ascot Reservoir, Harbor Generation Station – Powerhouse,** and **Harvey Mudd College – Owens Lakebed.**
- **Van Norman Bypass Covered Reservoir (3-5 MWdc)** – Construction is scheduled to start in January 2014.
- **Projects under construction :**
    - **Maclay Reservoir and Tanks (1.11 MWdc)** – Construction is in progress as of July 2013.
    - **Susana Tank (176 kWdc)**
    - **Harbor Generation Station - Warehouse (91 kWdc)**
    - **Palms District Warehouse (50 kWdc)**
- **Projects with issued CWPs :**
    - **La Kretz Hollywood Community Center (49 kWdc)**
    - **DS-144 (12 kWdc)**
    - **Valley Telecomm HQ - Truck Shed (19 kWdc)**
    - **Main Street Bldg 11 (27 kWdc)**

Los Angeles Department of Water & Power

Solar Incentive Program

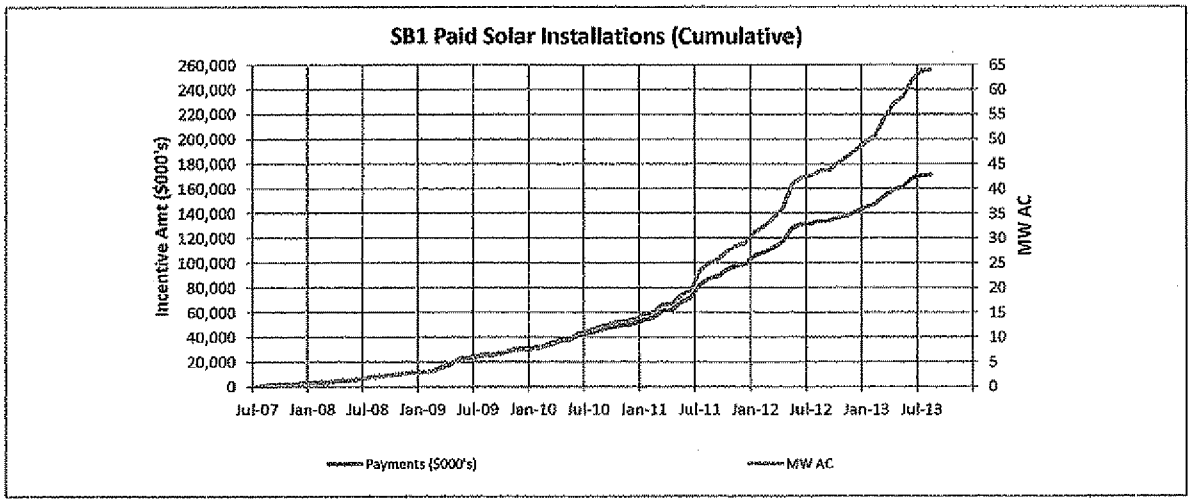
August 2013 Status Report

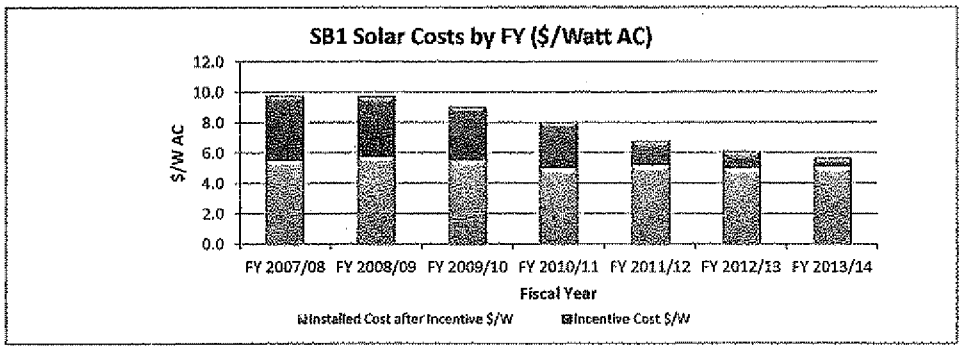
Solar Incentive Program Reservation Status	# of installations			MW AC			Incentive Payments ($000's)		
	Res	Non-Res	Total	Res	Non-Res	Total	Res	Non-Res	Total
Paid Reservations (SB1)	7,065	386	7,451	34.11	30.01	64.12	$84,692	$86,598	$171,290
Unpaid Confirmed Reservations	2,606	201	2,807	13.70	29.57	43.26	$13,279	$43,971	$57,250
Unconfirmed Reservations	348	92	440	2.11	9.91	12.02	$1,258	$8,147	$9,405
Total	10,019	679	10,698	50	69	119	$99,229	$136,716	$237,945
Lifetime Program Budget							$144,000	$144,000	$288,000
Remaining Incentives							$44,772	$5,284	$50,055

Paid Solar Installations	# of Installations			MW AC			Incentive Payments ($000's)		
Fiscal Year	Res	Non-Res	Total	Res	Non-Res	Total	Res	Non-Res	Total
Pre-Senate Bill 1 (SB1) Paid Solar Installations									
FY 1999-2005	466	58	524	1.81	6.48	8.29	$10,791	$37,366	$48,157
FY 2005/06	65	7	72	0.26	0.41	0.67	$863	$1,245	$2,108
FY 2006/07	238	5	243	0.94	0.24	1.18	$3,867	$618	$4,485
Subtotal	769	70	839	3.02	7.17	10.14	$15,521	$39,229	$54,750
SB1 Paid Solar Installations									
FY 2007/08	287	10	297	1.23	0.27	1.50	$5,250	$504	$5,754
FY 2008/09	403	62	465	1.87	2.47	4.35	$8,036	$9,260	$17,295
FY 2009/10	755	38	793	3.40	1.56	4.97	$13,183	$5,118	$18,301
FY 2010/11	1,104	39	1,143	5.52	3.11	8.62	$18,831	$11,234	$30,065
FY 2011/12	1,809	172	1,981	9.09	13.68	22.77	$22,172	$37,642	$59,814
FY 2012/13	2,300	60	2,360	10.98	8.71	19.70	$15,189	$22,533	$37,722
FY 2013/14	407	5	412	2.02	0.19	2.21	$2,031	$307	$2,339
Subtotal	7,065	386	7,451	34.11	30.01	64.12	$84,692	$86,598	$171,290

* Senate Bill 1 was adopted on July 1, 2007 by the State of California.

Total Installed Solar	8,871	484	9,355	42.04	40.43	82.48	N/A	N/A	N/A
Total Paid Solar Installations	7,834	456	8,290	37.13	37.18	74.25	$100,213	$125,827	$226,040

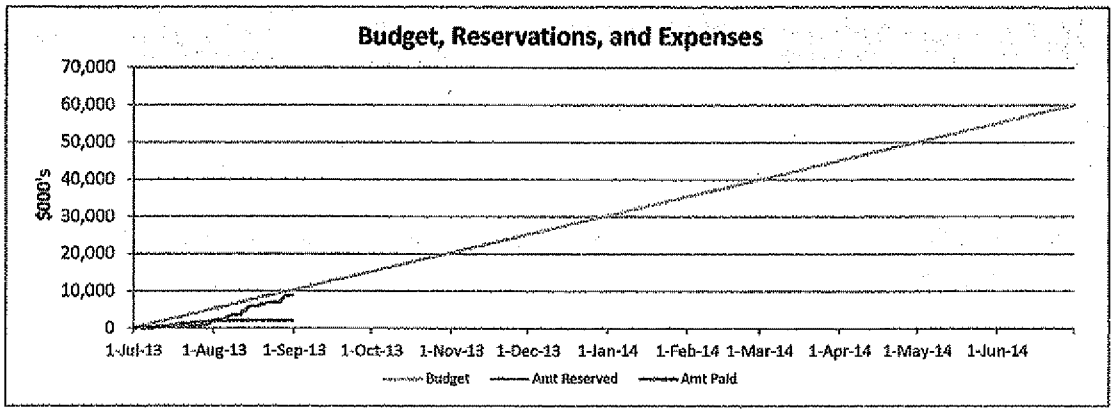




Los Angeles Department of Water & Power

Solar Incentive Program

August 2013 Status Report



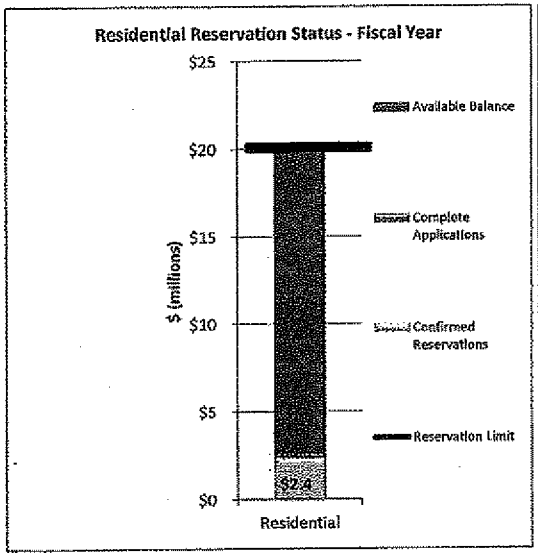
Monthly Statistics for Current FY	# of Installations			MW AC			Incentive Amount ($000's)		
Month	Res	Non-Res	Total	Res	Non-Res	Total	Res	Non-Res	Total
Confirmed Reservations									
Jul-13	261	12	273	1.34	0.15	1.49	$948	$150	$1,098
Aug-13	518	79	597	2.75	8.85	11.59	$1,445	$6,100	$7,545
Sep-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Oct-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Nov-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Dec-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Jan-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Feb-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Mar-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Apr-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
May-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Jun-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Total	779	91	870	4.09	8.99	13.08	$2,392	$6,250	$8,643
Installed Systems									
Jul-13	305	5	310	1.53	1.45	2.98	$1,528	$2,937	$4,464
Aug-13	193	10	203	1.00	1.04	2.03	$909	$1,567	$2,476
Sep-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Oct-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Nov-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Dec-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Jan-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Feb-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Mar-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Apr-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
May-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Jun-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Total	498	15	513	2.52	2.49	5.01	$2,437	$4,503	$6,940
Paid Systems									
Jul-13	334	5	339	1.64	0.19	1.84	$1,665	$307	$1,972
Aug-13	65	0	65	0.33	0.00	0.33	$331	$0	$331
Sep-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Oct-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Nov-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Dec-13	0	0	0	0.00	0.00	0.00	$0	$0	$0
Jan-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Feb-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Mar-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Apr-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
May-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Jun-14	0	0	0	0.00	0.00	0.00	$0	$0	$0
Total	399	5	404	1.98	0.19	2.17	$1,995	$307	$2,303

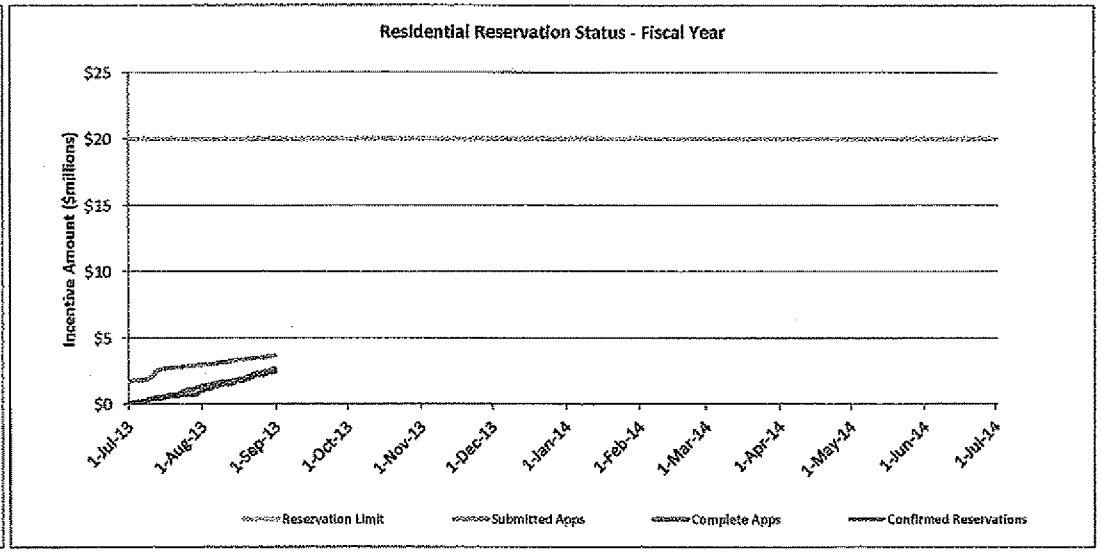
Los Angeles Department of Water & Power

Solar Incentive Program

August 2013 Status Report

Reservation Limit - Residential	Incentive Amount ($'000s)		FY TD	FY TD	FY TD	FY TD	FY TD
Phase	Last 7 Days	Last 30 Days	($'000s)	# of Apps	MW AC	($'000s) Submitted Not Complete	($'000s) Complete Not Confirmed
Fiscal Year 2013/14 Cap			$20,000				
Submitted Applications	$143	$705	$2,033	800	4.20	$413	
Complete Applications	$314	$1,307	$2,591	881	4.59		$251
Confirmed Reservations	$243	$1,445	$2,392	779	4.09		
Available Balance			$17,357				



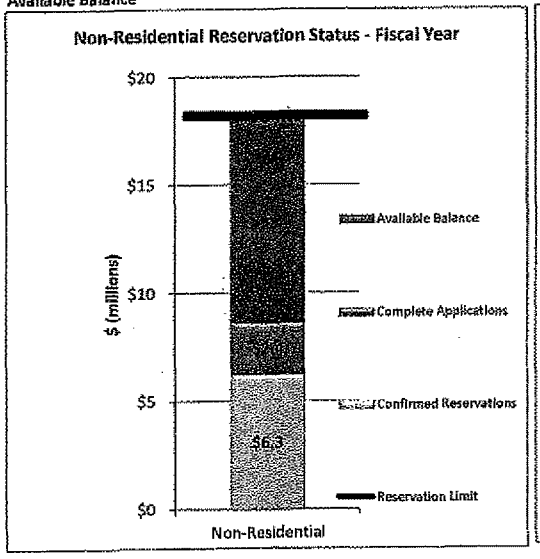


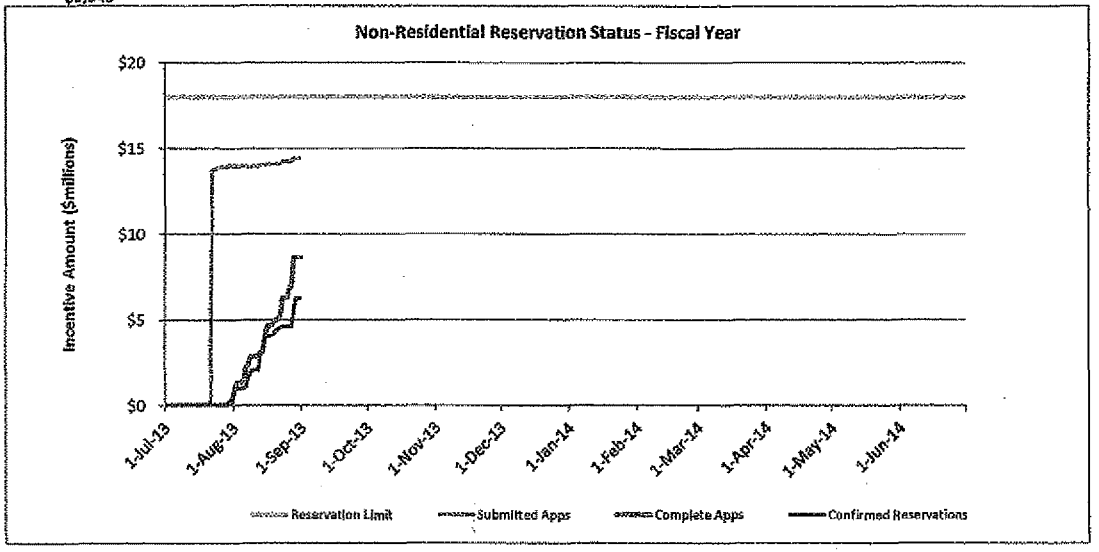
Los Angeles Department of Water & Power

Solar Incentive Program

August 2013 Status Report

Reservation Limit - Non-Residential							
Phase	Incentive Amount ($'000s) Last 7 Days	Last 30 Days	FY TD ($'000s)	FY TD # of Apps	FY TD MW AC	FY TD ($'000s) Submitted Not Complete	FY TD ($'000s) Complete Not Confirmed
Fiscal Year 2013/14 Cap			$18,000				
Submitted Applications	$164	$458	$14,363	180	18.89	$5,737	
Complete Applications	$2,390	$8,341	$8,660	115	11.96		$2,410
Confirmed Reservations	$1,651	$6,100	$6,250	91	8.99		
Available Balance			$9,340				



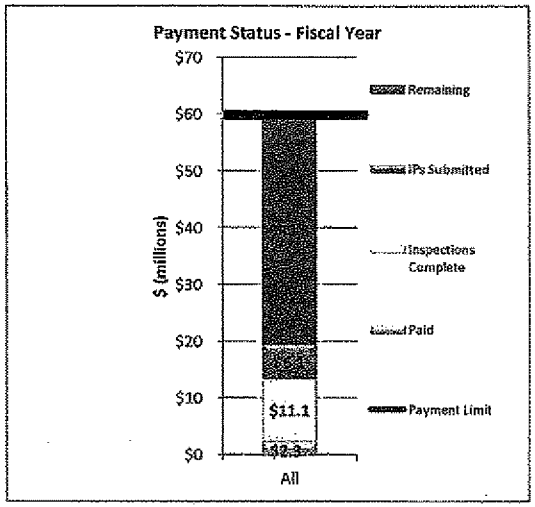


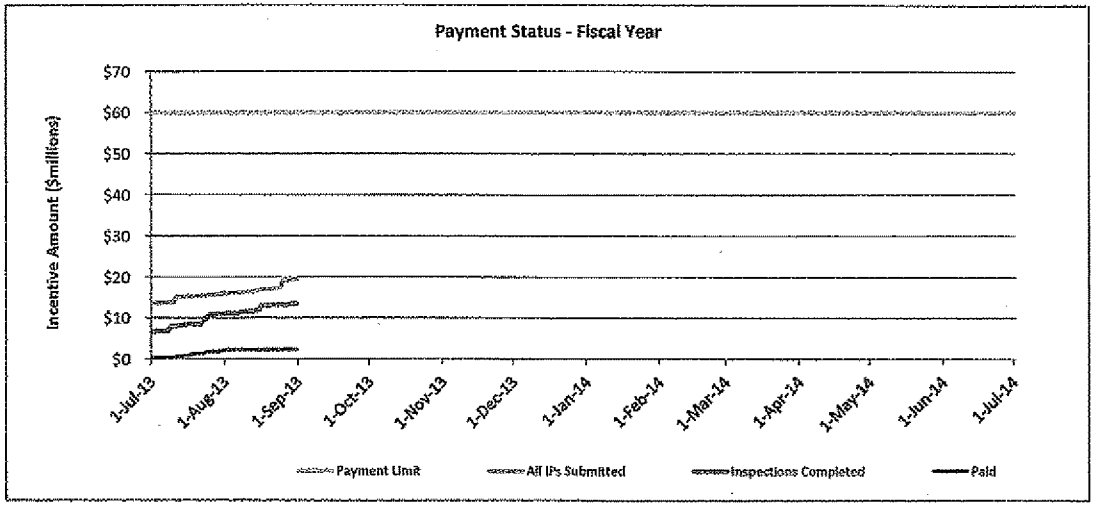
Los Angeles Department of Water & Power

Solar Incentive Program

August 2013 Status Report

Payment Limit - All	Incentive Amount ($'000s)		FY TD	FY TD	FY TD	FY TD	FY TD
Phase	Last 7 Days	Last 30 Days	($'000s)	# of Apps	MW AC	($'000s)	($'000s)
						IPs Submitted	Inspected Not
Fiscal Year 2013/14 Cap			$60,000			Not Inspected	Paid
IPs Submitted	$2,173	$3,571	$5,966	674	7.72	$3,630	
Inspections Complete	$214	$2,476	$6,940	513	5.01		$6,656
Paid	$4	$331	$2,303	404	2.17		
Remaining			$40,471				





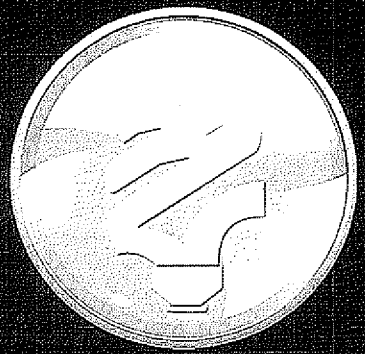
Los Angeles Department of Water & Power

Next Century Power: Energy Efficiency for LA

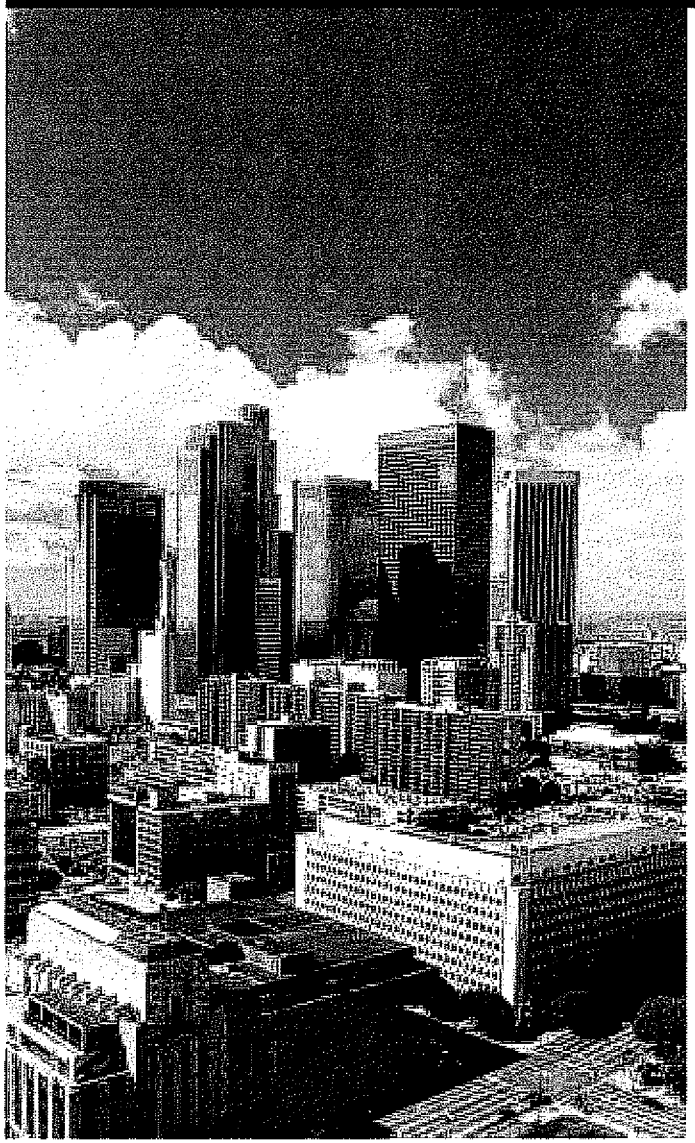
Semi-Annual Update to the LADWP Board

August 27, 2013

David Jacot, P.E.
Director of Energy Efficiency

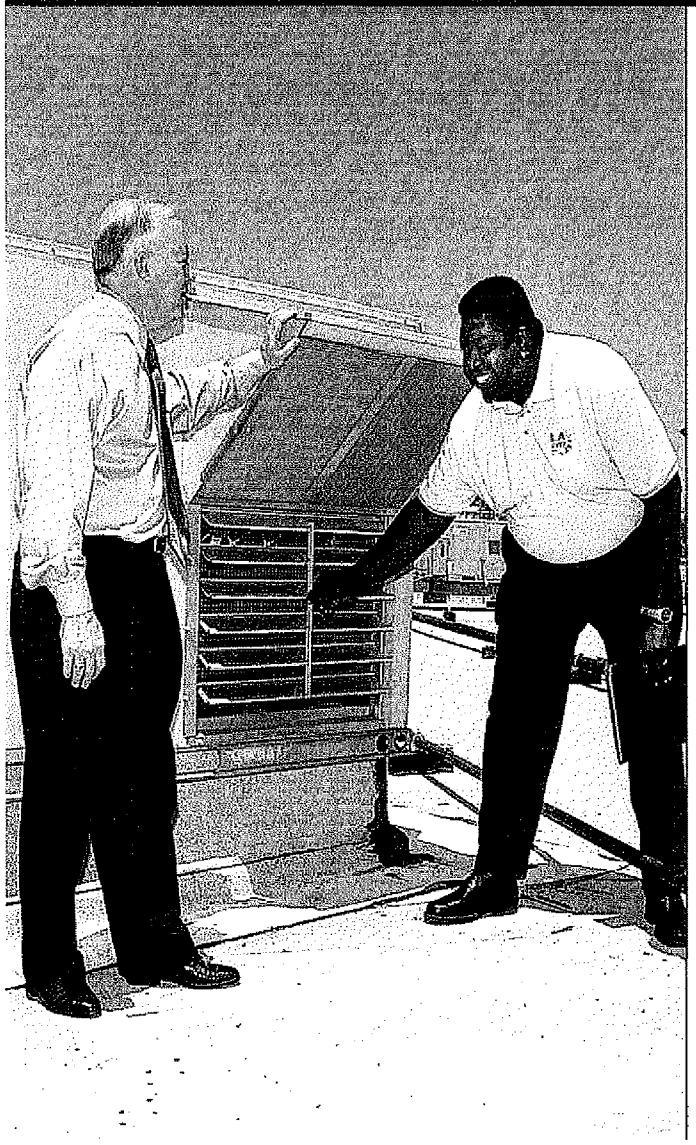


Next Century Power:
Semi-Annual Board Update - Agenda



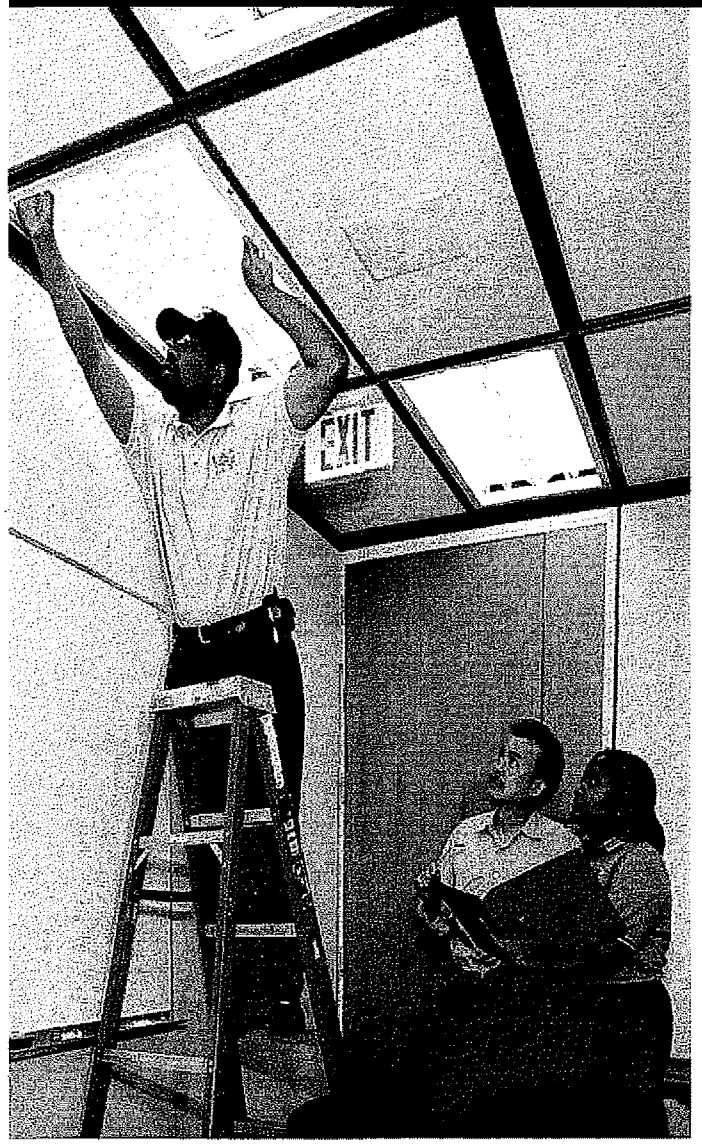
- FY 2012-13 Accomplishments
  - Timeline of Results
  - Operational Improvements
  - Spotlights:
    - Direct Install Programs
    - LADWP-Gas Company Partnership
    - Codes & Standards
- Look ahead to FY 2013-14
  - Forecast of results
  - Forward Initiatives
    - Spotlights:
      - EE Technical Assistance Program
      - RE - Land Use - Tx Nexus

Next Century Power: Accomplishments - Timeline



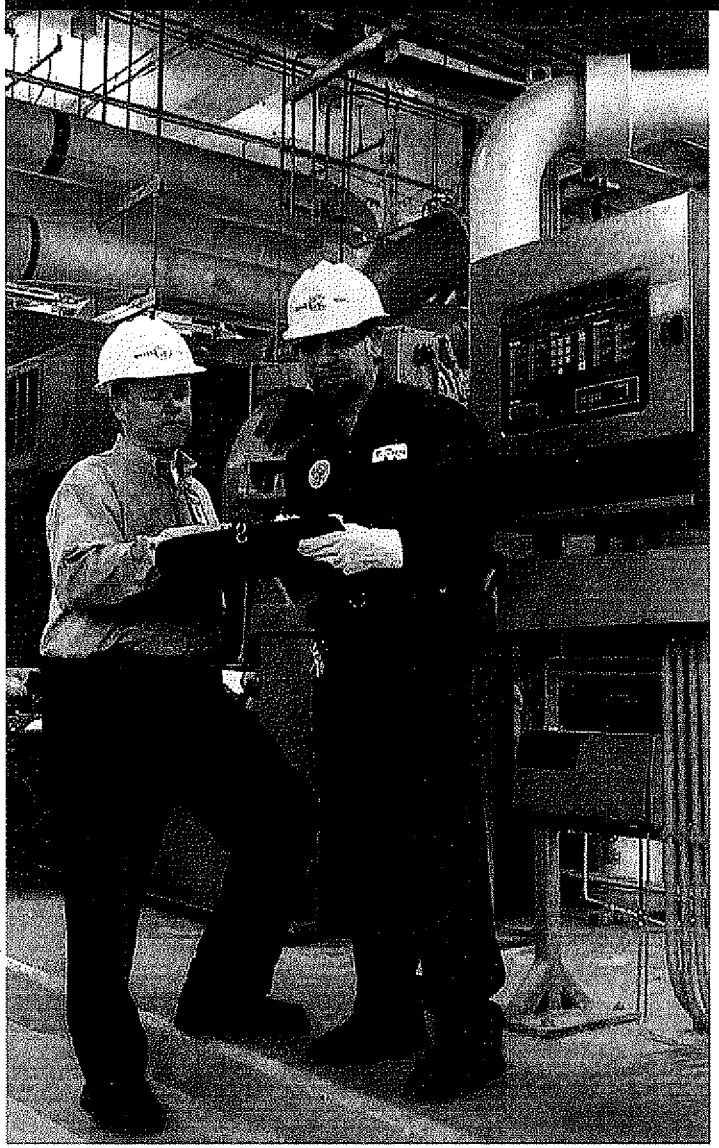
- **May 2012**: LADWP Board adopted a 10% goal and a 15% target, and new IOU-class budgets for EE:
  - $127M in 2012-13
  - $138M in 2013-14
- **July 2012**: Board adopted 8 guiding principles for the design of the EE portfolio
- **August 2012**: Board adopted MIUA between LADWP and The Gas Company (SCG) for joint programs serving our mutual customers with electric, gas, and water savings simultaneously
- **Fall 2012**: Created comprehensive set of Program Business Plans
- **Oct 2012 – June 2013**: Launched 7 joint programs with SCG

Next Century Power: Accomplishments - Results



- Final FY 2012-13 Results
  - 200 GWh
  - 40 MW
- 57% increase over FY 11-12 results reported last year
- Achieved despite:
  - No rate increase until Oct 2012
  - Direct Install programs ramp time

Next Century Power: Accomplishments – Operational Improvements

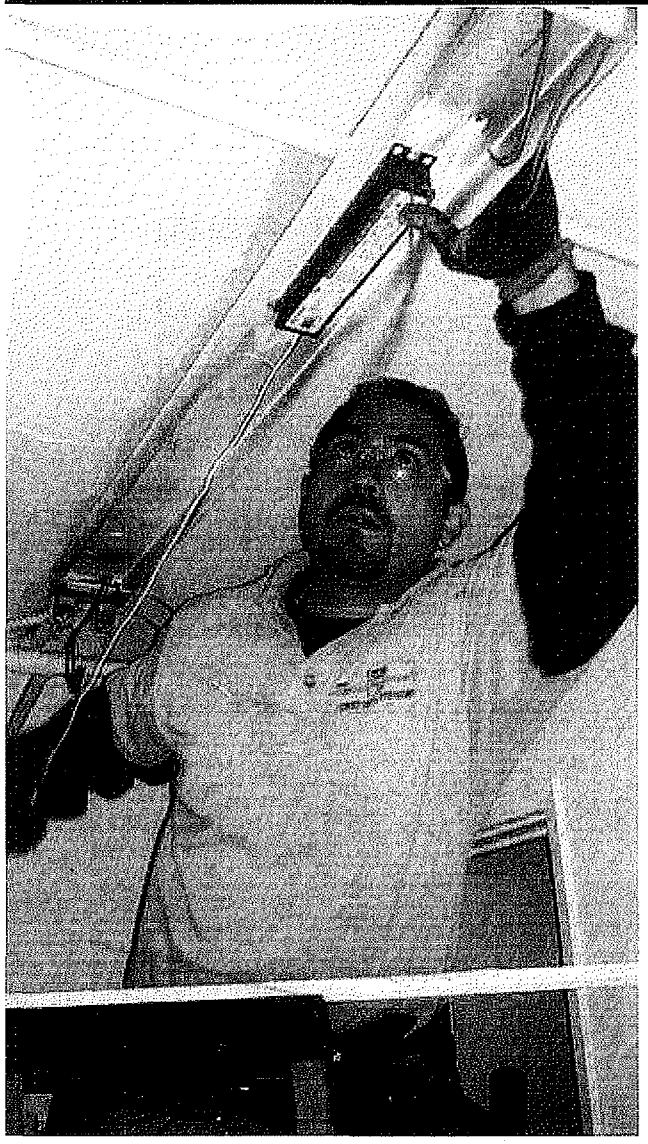


- Reorganized portfolio and staff to better serve customer needs
  - Broadly segmented in Mass Market and M/L CII
  - Hired a Portfolio Manager for each to provide strategic and operational oversight
  - Filled ~30 positions in EE and Admin Support
- Established regular KPI reporting
  - Monthly report of actual results and expected future results for forecasting
  - Set targets and monitor progress
- Retooled and reopened the CLEO program
  - June 2012 to June 2013 year-over-year improvement in processing capacity: **244%**

Spotlight – Direct Install Programs

- LADWP is investing almost half of the EE budget ($65M in FY 13-14) in Direct Install Programs to help our neediest customers and create skilled green jobs in our communities
- LAUSD Direct Install
- Small Business Direct Install
- Home Energy Improvement (HEIP)

Spotlight – Direct Install Programs
Small Business Direct Install (SBDI)



- Free direct-install program that targets small business, initially under 30kW (A1 Customers)
- Enerpath is currently responsible for assessments and electrical measure installations.
- LED measures added as of July 1, 2013
- Contractor anticipates completion of assessments and installations for all A1 customers by end of March 2014.
- Water and gas measures currently assessed by Enerpath will be installed by LADWP.
- The program will transition to A2 customers due to saturation in the A1 market segment.
- Six CBOs have been trained and deployed by Enerpath for market canvassing

Spotlight – Direct Install Programs
Small Business Direct Install (SBDI)

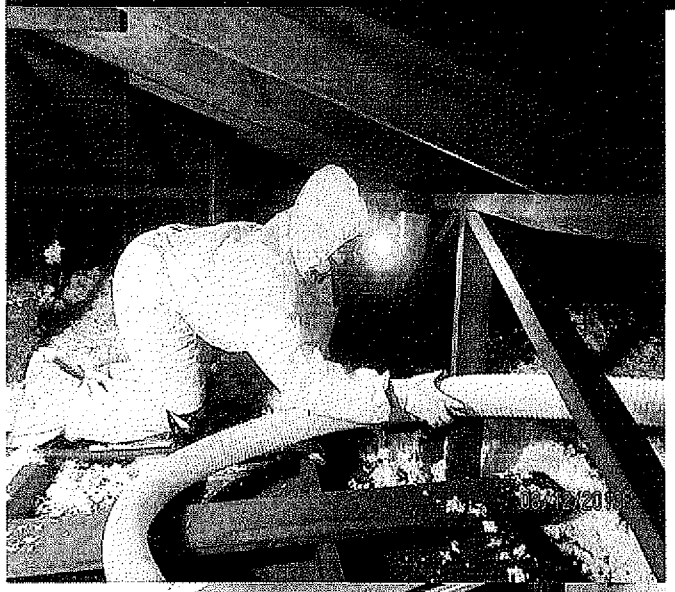
- SBDI FY 12-13 Metrics

Assessments Completed	**1203**
Installations Completed	**690**
ESRs in Field	**8**
Assessors in Field	**15**
Installers in Field	**27**

- SBDI Energy Savings

	FY 12-13	Program Total
Assessed	5,330,048 kWh	10,417,271 kWh
Installed	2,504,551 kWh	4,376,115 kWh

Spotlight – Direct Install Programs
Home Energy Improvement Program (HEIP)



- Offers residential customers free products and services to improve energy and water efficiency by upgrading/retrofitting the home's core systems
- Program rolled out in January 2013
- Energy Efficiency Group is responsible for customer intake and marketing activities
- Assessments and installations are performed by the Power System ISS Division.
- HEIP is going paperless upon development of a new real-time software by Enerpath.
- Collaboration with Department of Building and Safety expedites permits
- CBOs are utilized to ensure balanced district representation
- HEIP assessments capture residential data that may be used for other energy saving programs, now or in the future (i.e. Refrigeration Program)

Spotlight – Direct Install Programs
Home Energy Improvement Program (HEIP)

- HEIP FY 12-13 Metrics

Appointments Scheduled	392
Assessments - Completed	204
Drop-outs/ Declinations	15
Installations - Completed	104
Building Permits - Completed	22
Files Completed (Review Pending)	138
Units in the Queue	292 (45 MUDS)

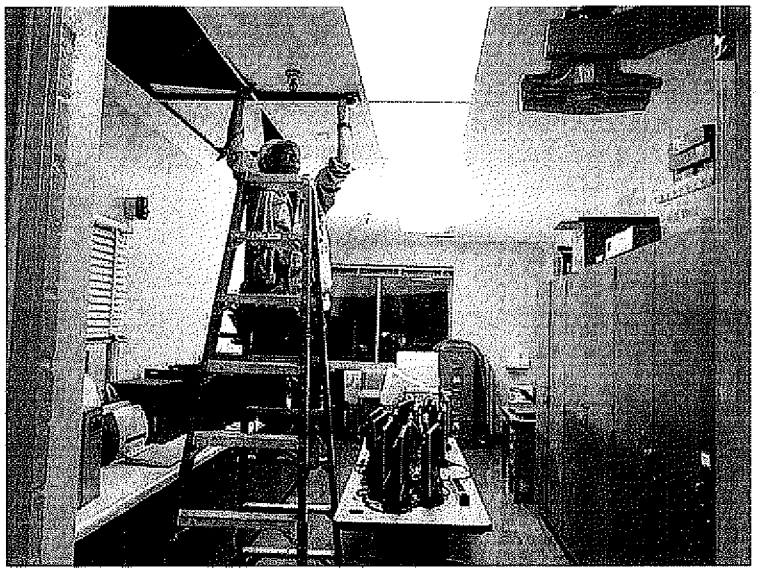
- HEIP Program To Date Energy Savings

Order Status Complete

Year	Month	# of Orders	Peak kW	kWH Saved/Yr	Gal Saved/Yr
2013	Feb	18	22.8740	20,973.470	103,411.52
	Mar	136	255.2490	237,810.030	1,245,829.28
	Apr	33	47.7310	42,798.470	276,553.67
	Jun	94	123.9350	133,977.250	796,107.19
	Jul	148	233.3100	249,170.470	1,418,222.17
	Aug	43	57.1740	71,217.620	431,970.86
Grand Total		472	740.2760	755,747.310	4,272,094.67

- ❖ The HEIP workforce consist of the Metro group and the Valley group. Each group consists of six crews.
- ❖ The current HEIP workforce is approximately 33 employees (20 Civil Servants and 13 UPCTs)

Spotlight – Direct Install Programs
LAUSD Direct Install



- Joint partnership with to reduce energy usage
- Energy efficiency upgrades in lighting, water, and natural gas
- Approximately 400 schools with 1,400 building allow for numerous potential retrofit projects
- LADWP is the lead in a partnership with LAUSD. Joint workforce MOU (Board Resolution 013 050)

Spotlight – Direct Install Programs
LAUSD Direct Install

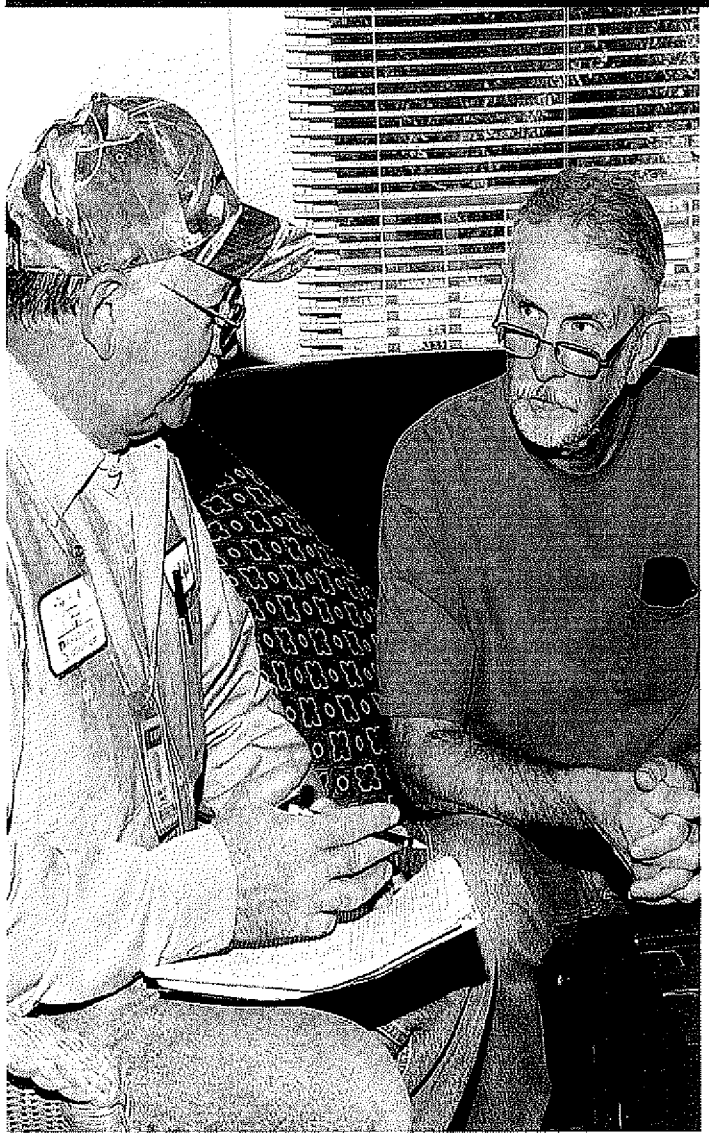
COMPLETED	IN PROGRESS	UPCOMING
LA Academy M.S.	Banning H.S.	Glassell E.S.
Evans Adult School	North Valley Occupational Center	West Valley Occupational Center
Lanterman H.S.	El Camino Real H.S.	Fairfax H.S.

- Three ISS Division crews are utilized in the program. The current workforce is approximately 30 employees which includes 10 UPCTs.

- Energy Savings (Monthly Projected kWh savings for schools listed above)

COMPLETED	IN PROGRESS	UPCOMING
182,117	123,471	17,125
39,182	61,396	71,597
19,070	128,304	177,519

Spotlight - Partnership with Southern California Gas Company (SCG)

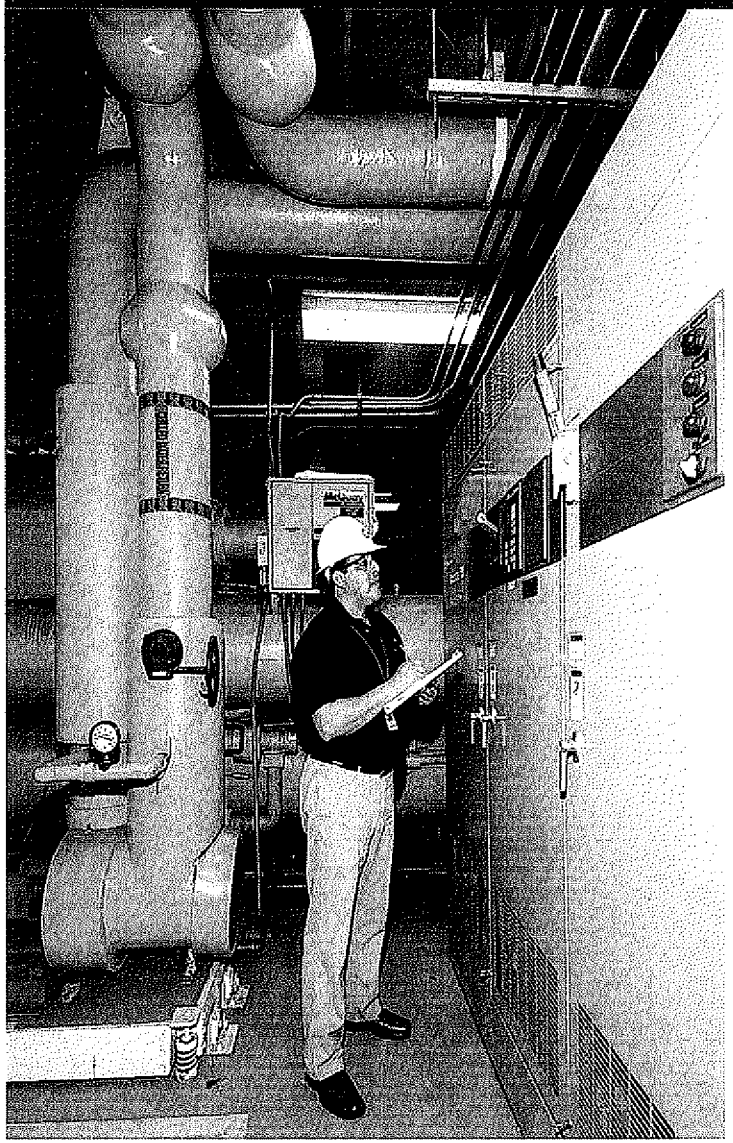


- On 8/23/12 LADWP Board approved a Master Inter-Utility Agreement (MIUA) with SCG allowing co-funding of each other's programs
  - One utility leads implementation with combined utility resources
  - Allows electric, gas, and water programs and incentives to be combined into a one-stop shop or customers
  - Customers can see four positive bill impacts (electric, gas, water, sewer) from combined programs
- Almost 50% of LADWP EE Portfolio is invested in programs joint with SCG
- Broad support: SCG, LABC, NRDC, Mayor's Office, etc.

Spotlight - Partnership with Southern California Gas Company (SCG)

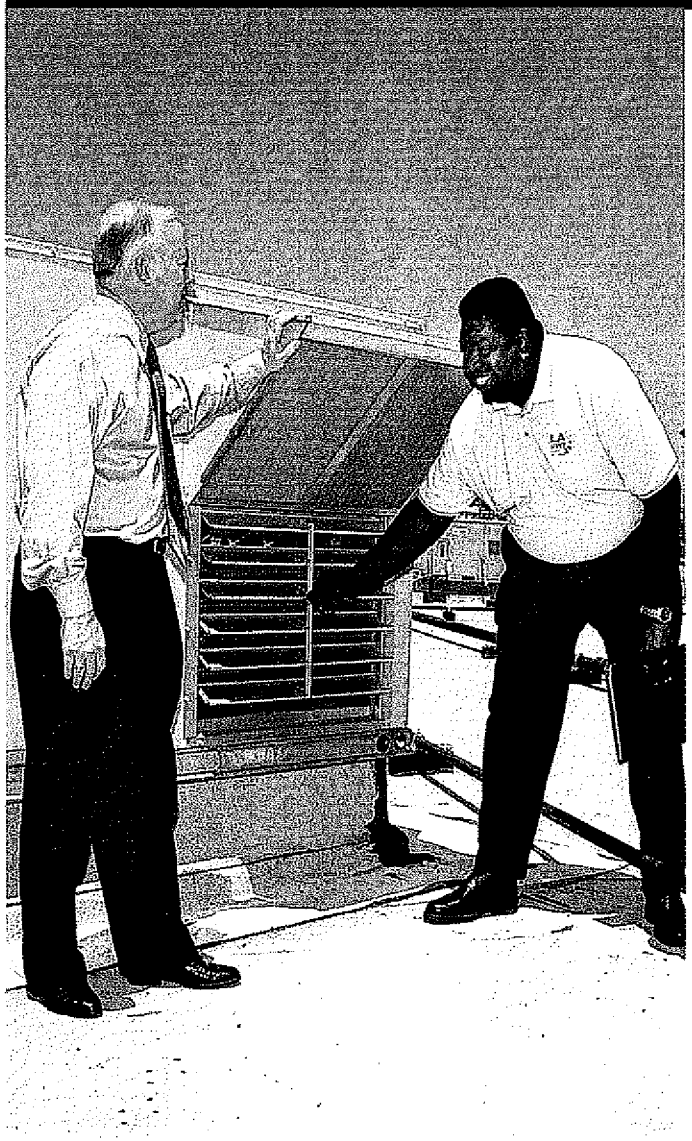
- LADWP and SCG are moving forward with many joint programs under the partnership
- Already Launched:
  - Retro-Commissioning Express
  - Residential New Construction
  - Commercial New Construction
  - Energy Upgrade California
  - Multifamily Direct Install Aerators and Showerheads
  - LA Better Buildings Challenge (tech support and outreach)
  - Small Business Direct Install (July 2013)
  - LAUSD Direct Install (July 2013)
- Coming Soon:
  - Codes & Standards (Oct 2013)
  - Emerging Technologies Program (Oct 2013)
  - Others in scoping

Spotlight – Codes and Standards Background



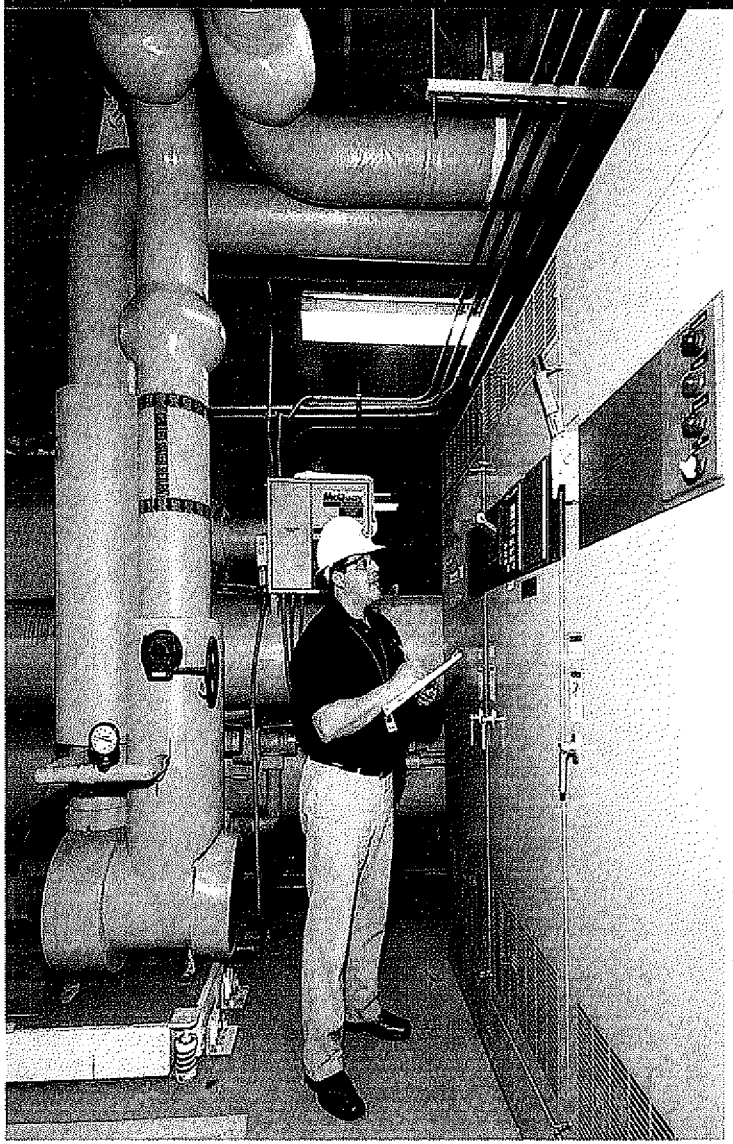
- CA achieves energy efficiency through voluntary programs (utility incentives, etc.) and Codes & Standards (C&S)
- Advancing C&S continually raises the baseline for voluntary "beyond-code" savings, presenting challenges for EE programs to achieve goals
- Emerging Technologies mitigate this but only to a degree – subject to diminishing returns (ex: 100W Incandescent -> 23W CFL -> 18W LED)
- IOUs' EE programs are made whole via a Codes & Standard allocation that they claim as part of their EE results reporting
- This allocation is calculated via a methodology co-developed by the four IOUs and approved by the CPUC and CEC

Spotlight – Codes and Standards Background



- Allocation is based on % of total statewide kWh sales each IOU provides
- IOUs constitute about 72% of kWh retail, POUs 28% (LADWP 9%)
- C&S savings are reported by IOUs as part of their larger EE results, but historically not by POUs
- In 2009 the IOUs attempted to claim the C&S savings occurring in POU territory; CPUC emphatically denied this request
- Upshot: C&S savings occurring in POU service territory are not being accounted for in the CEC's tallying of statewide utility program achievements

Spotlight – Codes and Standards Equity for POUs



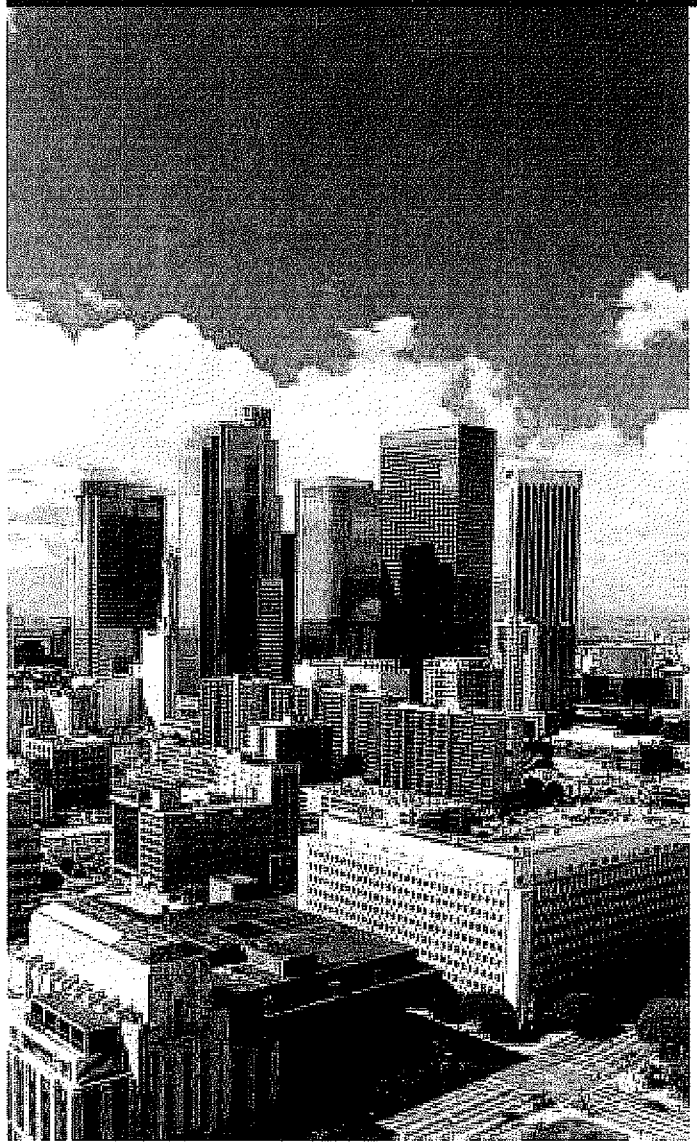
- **Problem:** POU incentive programs are undercut by C&S, while IOUs are made whole by the C&S allocation credit

- POUs are not on a level playing field with IOUs in regards to their EE program results
  - Overall results
  - Cost effectiveness
  - Levelized Cost
  - Results/EE budget
  - Etc.

Spotlight – Codes and Standards Equity for POUs

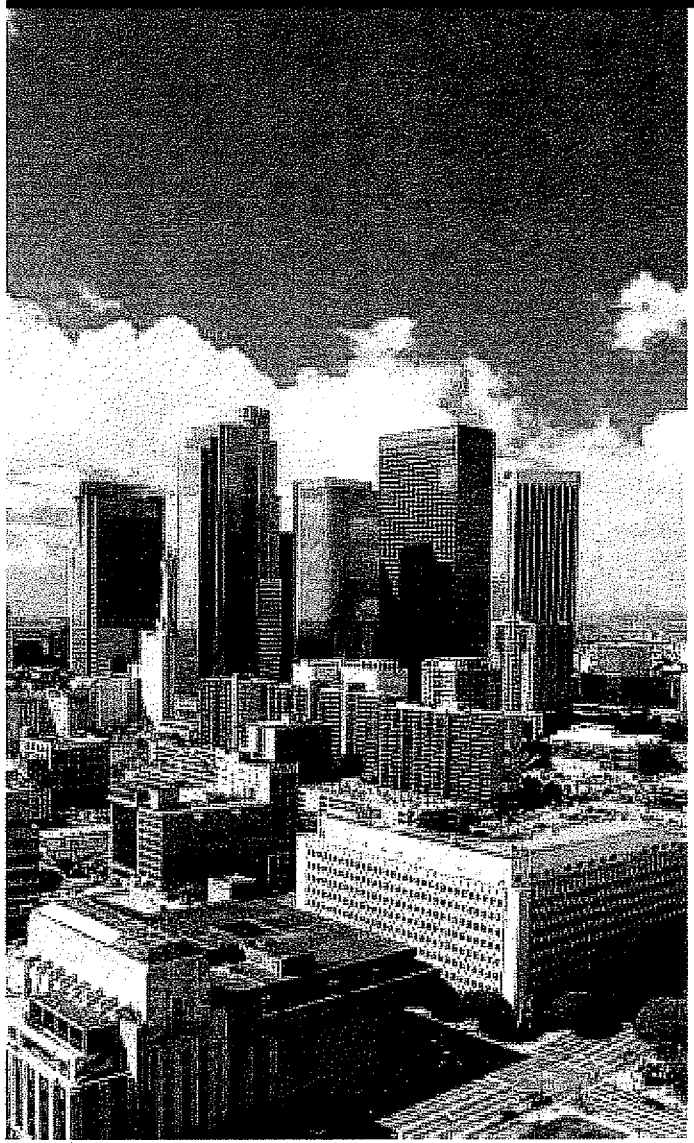
- **Solution**: Follow the same methodology and report our fair share of C&S savings
  - Consistent with IOUs – "apples to apples"
  - No double counting – IOUs are not reporting the C&S savings in POU territory
  - Makes EE portfolio performance comparisons between IOUs and POUs valid

Next Century Power: Look Ahead to FY 2013-14



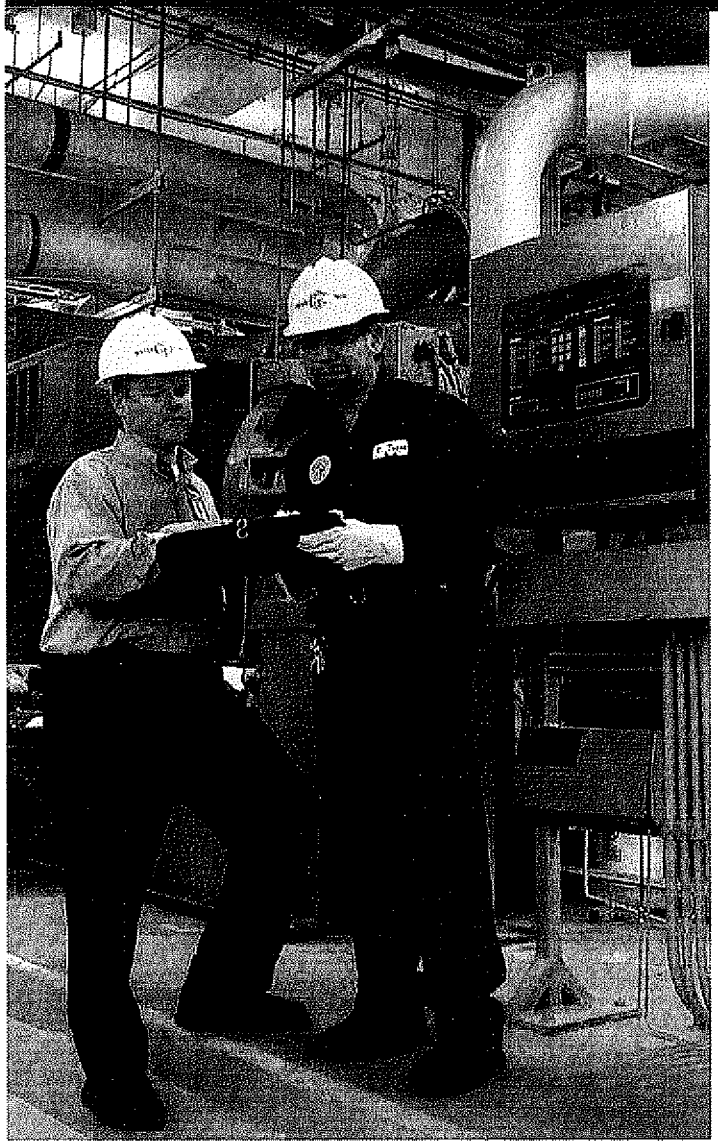
- Expected Results in FY 2013-14
  - Goal is 296 GWh – Expected to be met
  - Committed as of 7/1/13: 192 GWh
- LADWP – SCG Partnership:
  - Emerging Technologies Program
  - Codes and Standards Development
  - Food Service Equipment Rebates
  - Industrial Program Coordination
  - Account Executive Cross-Training Workshop in September

Next Century Power: Look Ahead to FY 2013-14



- Continued development of Program Business Plans
  - Add new programs (MTLA, MEO, etc.)
  - Establish targets for each program by year all the way to 2020; detailed Plan to achieve 10% savings from EE
  - Create water efficiency program business plans in same format as EE
  - Combined Energy/Water Plans for programs serving customers with both types of measures
  - Fall 2013

Spotlight – Energy Efficiency Technical Assistance Program (EETAP)



•EE Technical Assistance Program: Expanded suite of upfront project development services

- Audits/Assessments
- Technical analysis
- Economic analysis and recommendations (ROI)
- Ongoing project management through incentive process

- Trade Ally-driven – Market picks winners, not LADWP

- LADWP will pay up to the full cost of investment-grade audits
  - Eligibility requirements
  - Performance requirements

Spotlight – Resource Efficiency – Land Use – Transportation Nexus (RE-LU-Tx)

- To achieve GHG goals, especially 2030 and beyond, energy and water efficiency efforts must scale beyond individual buildings to consider neighborhoods, communities, cities, and regions
  - Resource use per capita is lower in compact, walkable, mixed-use urban environments
  - Mobility maintained with reduced transportation needs
  - Electrification of vehicle fleet (next 10-20 years) makes reducing VMT an EEM

- Concept paper under development – draft for circulation in Sept 2013

Questions or Comments?